

ABSTRACT

PACKAGING MACHINE

A packaging machine is described, which is equipped with sensors, actuators and drive systems, comprising a servo motor, a central control unit and a system for data transmission. The actual values of the sensors, actuators and drive systems are recorded in digital form in each case and transferred with the use of a transmission protocol via the data transmission system to the central control unit, evaluated by the latter and the determined setpoint values or control commands are also transmitted, in digital form and with the use of the transmission protocol, from the control system via the data transmission system to the actuators or drives. According to the invention, it is provided that the data transmission between sensors, actuators, drives and central control unit and vice versa takes place wirelessly and the transmission protocol operates cyclically and with short cycle times, preferably in millisecond pulses. According to the proposal, the transmission protocol serves for synchronisation of all sensors, actuators and drives, prepares the actual values and the determined setpoint data of all drives in each cycle, the accuracy of the synchronisation and the preparation lying in the microsecond range. The transmission protocol keeps essential information redundant and eliminates errors in the data transmission by means of error correction processes, for example the HDLC process.